

**Abstract**

An apparatus for collecting and sensing light in a projector, comprising a cold mirror positioned directly in the incident light path from a lamp and illumination optics of the projector for reflecting a large portion of visible light towards a light  
5 imaging device while transmitting IR and UV light and a small portion of the visible light; a secondary mirror for reflecting the small portion of the visible light, an integrating box positioned to collect and integrate the small portion of visible light, a light tube in optical communication with the integrating box for further integrating and attenuating the small portion of visible light, and an electro-optic device within  
10 the light tube for measuring the small portion of visible light within the light tube and generating an electrical signal in response thereto.

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